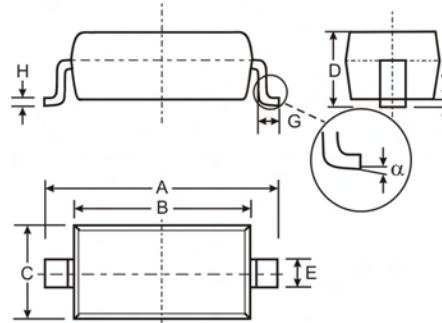


Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Very Low Reverse Capacitance
- **Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 3 and 4)**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking: Date Code & Type Code, See Page 3
- Type Codes: SD101AW S1 or SK
SD101BW S2 or SK
SD101CW S3 or SK
- Ordering Information: See Page 3
- Weight: 0.01 grams (approximate)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

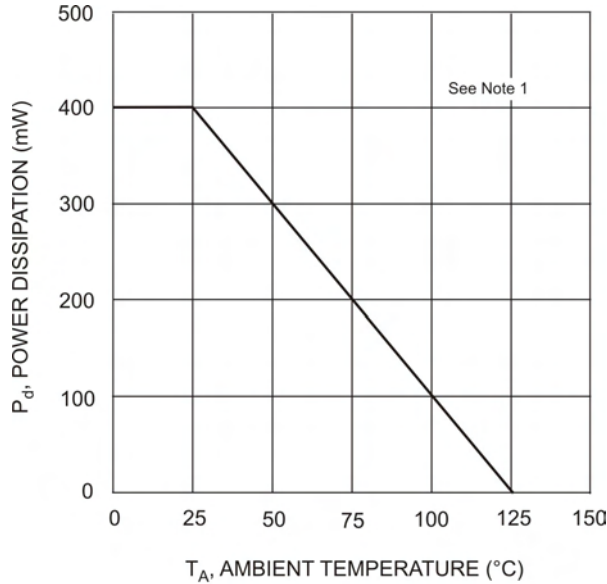
Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	SD101AW	SD101BW	SD101CW	Unit
Peak Repetitive Reverse Voltage	V _{RRM}				
Working Peak Reverse Voltage	V _{RWM}	60	50	40	V
DC Blocking Voltage	V _R				
RMS Reverse Voltage	V _{R(RMS)}	42	35	28	V
Forward Continuous Current (Note 1)	I _{FM}		15		mA
Non-Repetitive Peak Forward Surge Current	I _{FSM}		50		mA
			2.0		A
Power Dissipation (Note 1)	P _D		400		mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{θJA}		300		°C/W
Operating and Storage Temperature Range	T _J , T _{STG}		-65 to +125		°C

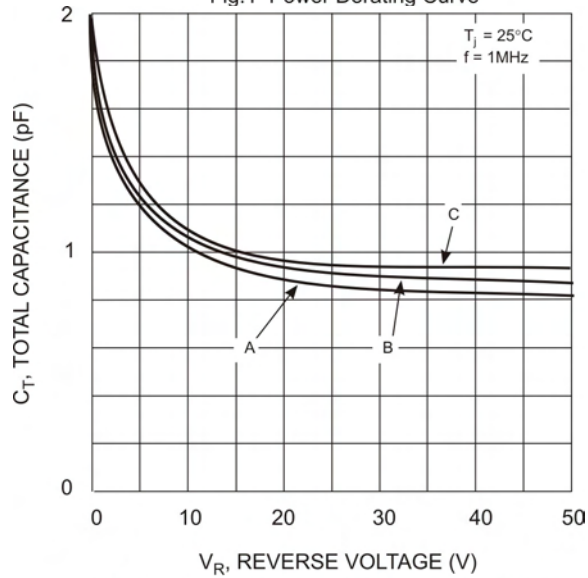
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD101AW	60	—	V	I _R = 10μA
	SD101BW	50			
	SD101CW	40			
Forward Voltage Drop	SD101AW	—	0.41	V	I _F = 1.0mA
	SD101BW		0.40		
	SD101CW		0.39		
	SD101AW		1.00		
	SD101BW		0.95		
SD101CW	0.90				
Peak Reverse Current (Note 2)	SD101AW	—	200	nA	V _R = 50V
	SD101BW				V _R = 40V
	SD101CW				V _R = 30V
Total Capacitance	SD101AW	—	2.0	pF	V _R = 0V, f = 1.0MHz
	SD101BW		2.1		
	SD101CW		2.2		
Reverse Recovery Time	t _{rr}	—	1.0	ns	I _F = I _R = 5.0mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

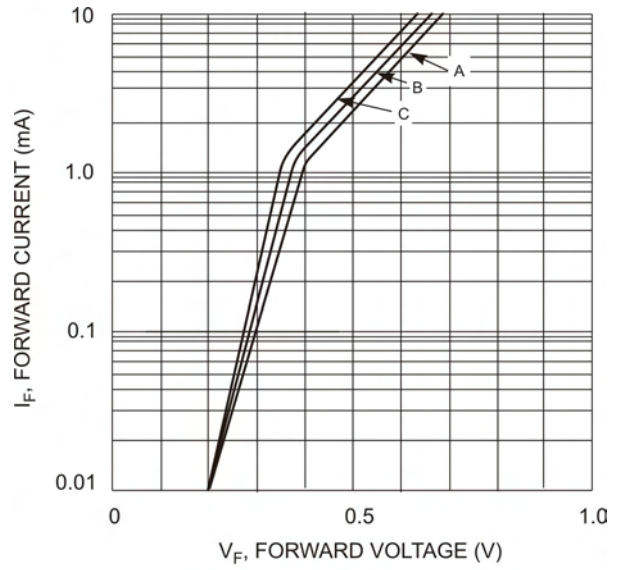
- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.
 3. No purposefully added lead. Halogen and Antimony Free.
 4. Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.



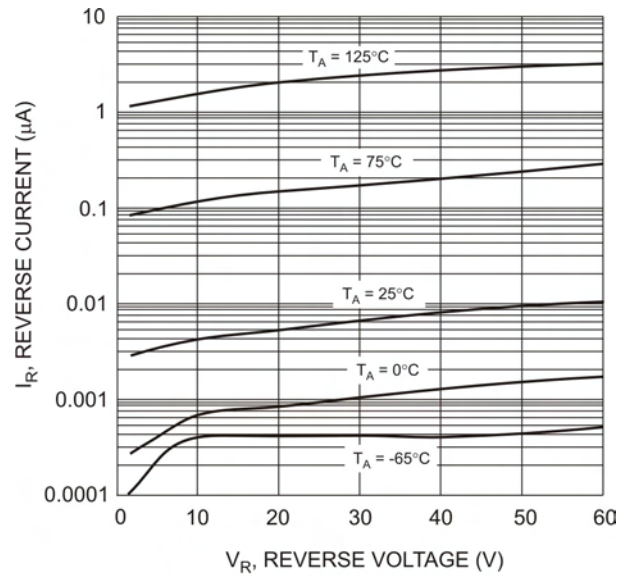
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Power Derating Curve



V_R , REVERSE VOLTAGE (V)
Fig. 3 Typical Total Capacitance vs Reverse Voltage



V_F , FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristic



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Reverse Characteristics

Ordering Information (Note 5)

Device	Packaging	Shipping
SD101xW-7-F	SOD-123	3000/Tape and Reel
SD101xW-13-F	SOD-123	10,000/Tape and Reel

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



XX = Product Type Marking Code, See Page 1

YM = Date Code Marking

Y = Year (ex: T = 2006)

M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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